

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY
(Chapter II of the Patent Cooperation Treaty)

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(PCT Article 36 and Rule 70)

Applicant's or agent's file reference 55863 PCT si/ak		FOR FURTHER ACTION See Form PCT/IPEA/416	
International application No. PCT/SE2003/001248	International filing date (day/month/year) 2003-08-04	Priority date (day/month/year)	
International Patent Classification (IPC) or national classification and IPC A01N 59/02, A01N 37/36			
Applicant DeLaval Holding AB et al			

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
- a. ☒ (sent to the applicant and to the International Bureau) a total of 4 sheets, as follows:
- ☒ sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
- ☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
- b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) _____, containing a sequence listing and/or tables related thereto, in electronic form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).

4. This report contains indications relating to the following items:

- ☒ Box No. I Basis of the report
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☒ Box No. VIII Certain observations on the international application

Date of submission of the demand 2005-02-21	Date of completion of this report 2005-11-14
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Form PCT/IPEA/409 (cover sheet) (April 2005)

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.

PCT/SE2003/001248

Box No. I Basis of the report

1. With regard to the language, this report is based on:

☒ the international application in the language in which it was filed

☐ a translation of the international application into _____, which is the language of a translation furnished for the purposes of:

☐ international search (Rules 12.3(a) and 23.1(b))

☐ publication of the international application (Rule 12.4(a))

☐ international preliminary examination (Rules 55.2(a) and/or 55.3(a))

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1 - 7 as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☒ the claims:

pages _____ as originally filed/furnished

pages* _____ as amended (together with any statement) under Article 19

pages* 1 - 4 received by this Authority on 14.10.05

pages* _____ received by this Authority on _____

☐ the drawings:

pages _____ as originally filed/furnished

pages* _____ received by this Authority on _____

pages* _____ received by this Authority on _____

☐ a sequence listing and/or any related table(s) – see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages _____

☐ the claims, Nos. _____

☐ the drawings, sheets/figs _____

☐ the sequence listing (*specify*): _____

☐ any table(s) related to the sequence listing (*specify*): _____

* If item 4 applies, some or all of those sheets may be marked "superseded."

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Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>1-33</u>	YES
	Claims		NO
Inventive step (IS)	Claims	<u>1-33</u>	YES
	Claims		NO
Industrial applicability (IA)	Claims	<u>1-33</u>	YES
	Claims		NO

2. Citations and explanations (Rule 70.7)

New amended claims have been filed on 14 October 2005. The amendment has resulted in a limitation of the scope of claims 1 as the definition of claim 2 has been introduced in claim 1 and the former claim 2 has been deleted. The same limitation has been made in claim 13 (former claim 14), whereby the former claim 15 has been deleted. The claims have been renumbered.

The claimed invention relates to sanitizing compositions containing a sulfite salt, a C2-C10 carboxylic acid and an alcohol. The object of the invention is to provide a sanitizing composition that is based on natural materials and is of food-grade.

Reference is made to the following documents:

- D1) EP 0640285 A1
- D2) WO 0194513 A1
- D3) WO 9746218 A2
- D4) Database WPI, AN 2000-621108, JP 2000201559 (Abstract)
- D5) STN International, File CAPLUS, AN 1983:401813, DN 99:1813
- D6) WO 9639842 A1

The document D2 is regarded as being the closest prior art to the subject-matter of the claims, and discloses: a sanitizing composition comprising sulfates or sulfonates such as alkyl sulfates (0,01-5%), an acid such as lactic acid (0,01-5%) and an alcohol (0,25-10%).

The subject-matter of the claims therefore differs from this known D2 in that: the sulphur-containing salt is an alkali or alkaline earth metal sulfite instead of an alkyl sulphate.

.../...

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: BOX V

Sulfates and sulfonates are known surfactants, while sulfite is a known biocid

The applicant has further shown that compositions containing both sodium sulfite and lactic acid have a better bactericid effect than compositions containing only one of these substances.

Thus, the invention according to claims 1-33 of the present application is considered to meet the requirements of the PCT with respect to novelty and inventive step.

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Box No. VIII Certain observations on the international application

The following observations on the clarity of the claims, description, and drawings or on the question whether the claims are fully supported by the description, are made:

Although claims 1 and 13 have been drafted as separate independent claims, they appear to relate effectively to the same subject-matter and to differ from each other only in respect of the terminology used for the features of that subject-matter.

The only difference between claim 1 and claim 13 is that "by weight of a sulphur-containing salt" in claim 1 reads "by weight of an inorganic sulphur-containing salt" in claim 13. As the sulphur-containing compound now has been limited to alkali or alkaline earth metal sulfite salt, which are inorganic compounds, the content of the claims are exactly the same.

Thus, claims 13-24 are equal to claims 1-12, and could be excluded.

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Claims

- 5 1. A sanitizing composition comprising from about 0.25-10% by weight of a sulfur-containing salt, from about 0.25-10% by weight of a substituted or unsubstituted C2-C10 monocarboxylic acid or a salt thereof, and from about 0.1-30% by weight of an alcohol, said sulfur-containing salt being selected from the group consisting of alkali and alkaline earth metal sulfite salts.
- 10 2. The composition of claim 1, said sulfur-containing salt being sodium sulfite.
3. The composition of any of the preceding claims, said alcohol being
15 selected from the group consisting of C1-C8 alcohols and mixtures thereof.
4. The composition of claim 3, said alcohol being selected from the group consisting of ethanol, propanol, and mixtures thereof.
- 20 5. The composition of any of the preceding claims, said composition comprising from about 0.5-5.0% by weight of said sulfur-containing salt.
6. The composition of any of the preceding claims, said carboxylic acid comprising lactic acid or a salt thereof.
- 25 7. The composition of any of the preceding claims, said composition comprising from about 0.5-5.0% by weight of said carboxylic acid or salt thereof.
8. The composition of any of the preceding claims, said composition
30 comprising from about 1-15% by weight of said alcohol.

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9. The composition of any of the preceding claims, said composition
5 further comprising an emollient.

10. The composition of claim 9, said emollient selected from the group
consisting of glycerin, lanolin, sorbitol, the alkylene glycols, the polyols, fatty acid esters of
polyhydroxylated compounds, and mixtures thereof.

10

11. The composition of any of the preceding claims, said composition
further comprising a surfactant.

12. The composition of claim 11, said surfactant being selected from the
15 group consisting of nonionic surfactants, anionic surfactants, cationic surfactants, amphoteric
surfactants, polyoxyethylene alcohols, polyoxyethylene nonylphenols, polyalkylene oxide
block copolymers, polyvinylpyrrolidone, and mixtures thereof.

13. A sanitizing composition comprising from about 0.25-10% by weight
20 of an inorganic sulfur-containing salt, from about 0.25-10% by weight of a substituted or
unsubstituted C2-C10 carboxylic acid or a salt thereof, and from about 0.1-30% by weight of
an alcohol, said sulfur-containing salt being selected from the group consisting of alkali and
alkaline earth metal sulfite salts.

14. The composition of claim 13, said sulfur-containing salt being sodium
25 sulfite.

15. The composition of any of the claims 13-14, said alcohol being
selected from the group consisting of C1-C8 alcohols and mixtures thereof.

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5 16. The composition of claim 15, said alcohol being selected from the group consisting of ethanol, propanol, and mixtures thereof.

17. The composition of any of the claims 13-16, said composition comprising from about 0.5-5.0% by weight of said sulfur-containing salt.

10 18. The composition of any of the claims 13-17, said carboxylic acid comprising lactic acid or a salt thereof.

19. The composition of any of the claims 13-18, said composition comprising from about 0.5-5.0% by weight of said carboxylic acid or salt thereof.

15 20. The composition of any of the claims 13-19, said composition comprising from about 1-15% by weight of said alcohol.

20 21. The composition of any of the claims 13-20, said composition further comprising an emollient.

22. The composition of claim 21, said emollient selected from the group consisting of glycerin, lanolin, sorbitol, the alkylene glycols, the polyols, fatty acid esters of polyhydroxylated compounds, and mixtures thereof.

25 23. The composition of any of the claims 13-22, said composition further comprising a surfactant.

30 24. The composition of claim 23, said surfactant being selected from the group consisting of nonionic surfactants, anionic surfactants, cationic surfactants, amphoteric surfactants, polyoxyethylene alcohols, polyoxyethylene nonylphenols, polyalkylene oxide block copolymers, polyvinylpyrrolidone, and mixtures thereof.

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5 25. A sanitizing wipe comprising an absorbent substrate and a sanitizing composition according to any of the preceding claims loaded thereon.

10 26. The sanitizing wipe of claim 25, said absorbent substrate comprising a woven or nonwoven web of natural fibers, synthetic fibers, or mixtures of natural and synthetic fibers.

27. The sanitizing wipe of claim 26, said absorbent substrate comprising cellulosic fibers.

15 28. A method of sanitizing a surface comprising contacting said surface with the composition of any of the claims 1-24.

29. The method of claim 28, said surface comprising animal skin.

20 30. The method of claim 29, said surface being a bovine teat.

31. A method of sanitizing a surface comprising wiping said surface with the sanitizing wipe of any of the claims 25-27.

25 32. The method of claim 31, said surface comprising animal skin.

33. The method of claim 32, said surface being a bovine teat.